



C I E L L I G H T C O . , L T D .

PRODUCT SPECIFICATION

Model No.: CLSS-39A1AUR-21

Drawing No.: \_\_\_\_\_

Customer: \_\_\_\_\_

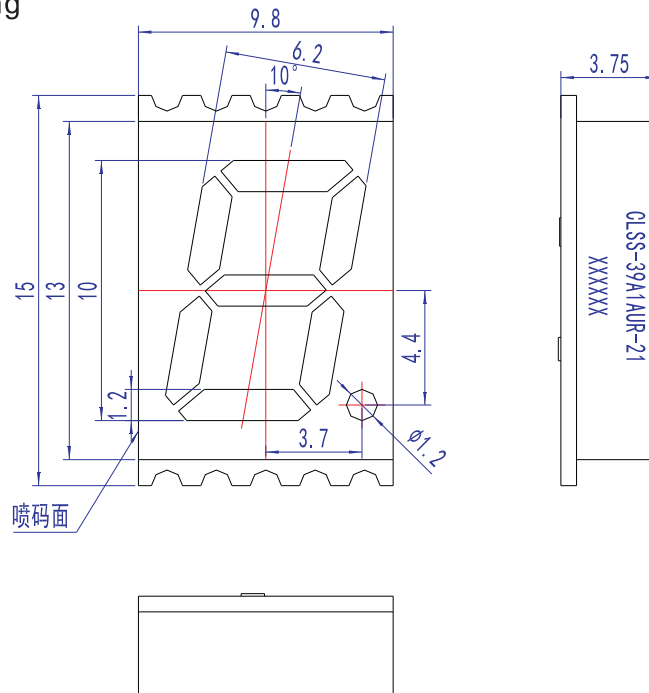
Customer's Model No.: \_\_\_\_\_

Customer's Drawing No.: \_\_\_\_\_

Descriptions

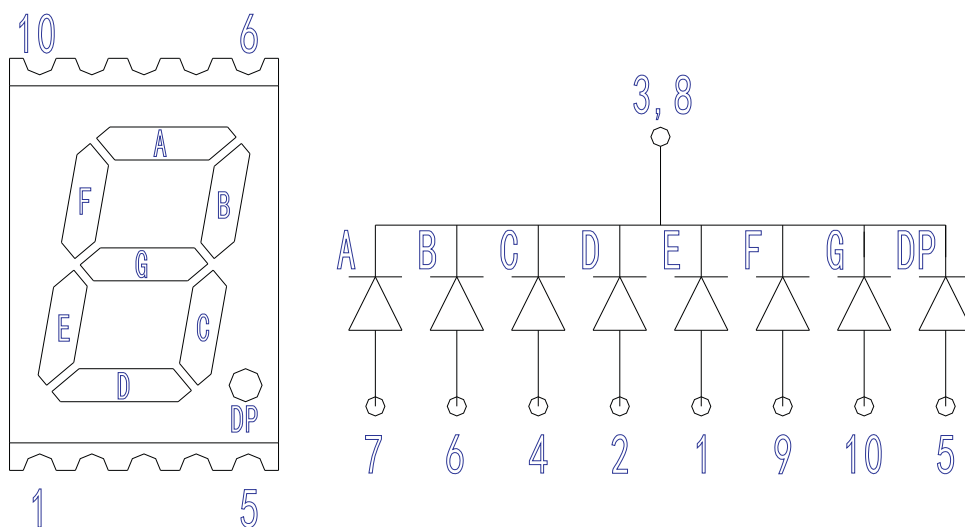
1. Emitting Color: Ultra Red
2. Lens Color: White Diffuse
3. Surface Black Color : Gray
4. Dice Material: AlGaInP/GaAs

Outline Drawing



Tolerance is  $\pm 0.25\text{mm}$  unless otherwise noted, Unit=mm  
 Pin bending  $\cong \text{length} * 1\%$

Internal Circuit Diagram(C.C.)



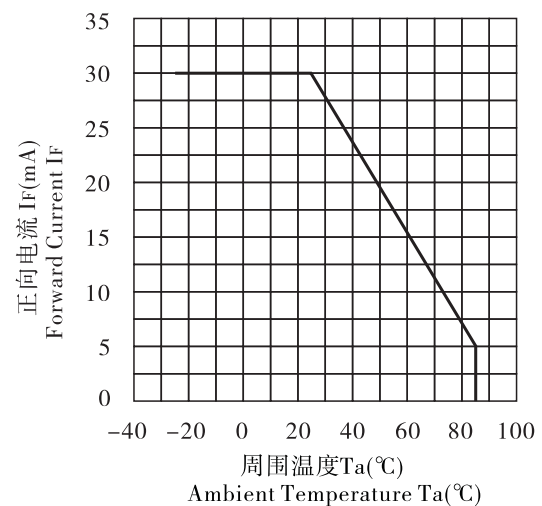
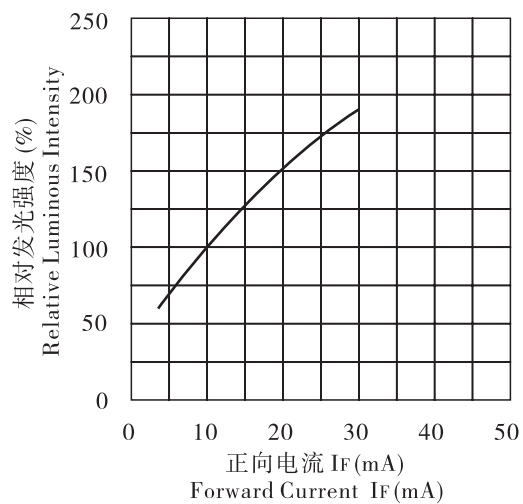
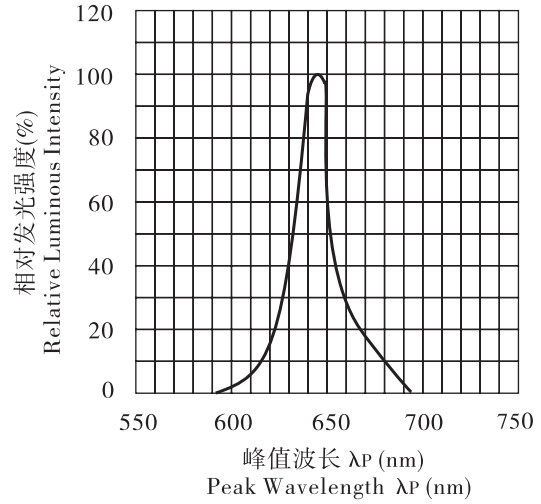
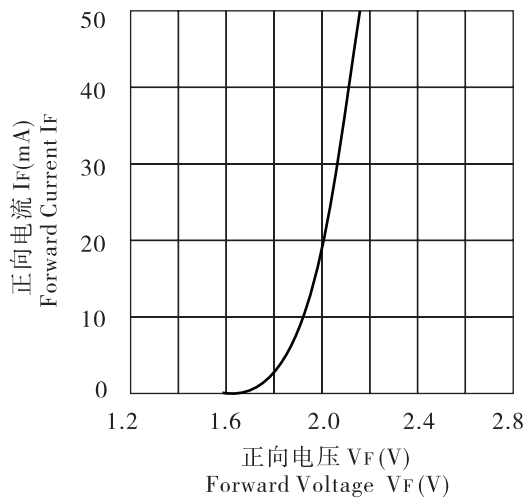
Electrical Optical Characteristics(Ta=25°C)

Parameter	Symbol	Ultra Red			Unit	Test Condition
		Min	Typ	Max		
Forward Voltage	V <sub>F</sub>	---	2.00	2.40	V	IF=20mA
Luminous Intensity	I <sub>V</sub>	7.0	13.7	---	mcd	IF=10mA
Peak Wavelength	λ <sub>P</sub>	---	645	---	nm	IF=20mA
Dominant Wavelength	λ <sub>d</sub>	---	635	---	nm	IF=20mA
Spectral Line half-width	Δλ	---	20	---	nm	IF=20mA
Reverse Leakage Current	I <sub>R</sub>	---	---	50	μA	VR=5V

Absolute Maximum Parameters(Ta=25°C)

Parameter	Symbol	Condition	Rating	Unit
Power Dissipation	P <sub>D</sub>	---	80	mW
Reverse Voltage	V <sub>R</sub>	---	5	V
Forward Average Current	I <sub>F</sub>	---	30	mA
Temperature Coefficient	I/C	---	0.33	mA/°C
Pulse Current	IFP	Duty=1/10,1kHz	100	mA
Operating Temperature Range	T <sub>opr</sub>	---	-25 ~ +85	°C
Storage Temperature Range	T <sub>stg</sub>	---	-30 ~ +100	°C
Soldering Condition	T <sub>sd</sub>	---	260°C/5sec	°C

Typical Electro/Optical Characteristic Curves(Ta=25°C)



Reliability Test Conditions

Test Item	Test Condition	Result	Judgment Criteria
Consecutive operating life test	IF=20mA, T=25°C, t=168h	0/10	Forward Voltage VF(V)= Upper Limit × 1.2 Reverse Leakage Current IR(μA)=Upper Limit × 2.0 Luminous Intensity IV (mcd)=Lower Limit × 0.7
High temperature storage life test	T=100°C, t=168h	0/10	
Low temperature storage life test	T=-25°C, t=168h	0/10	
High temperature humidity storage life test	T=85 ± 2°C, RH=85% ± 3, t=168h	0/10	
Temperature cycle test	-25°C~25°C~100°C 30min 5min 30min 10cycles	0/10	
Thermal shock test	100°C 0°C 5min 5min 20cycles	0/10	
Soldering heat test	T=260 ± 5°C, t=10s ± 1s	0/10	
Solderability test	T=235 ± 5°C, t=5s ± 0.5s	0/10	Steeped Part ≥ 95%
Fall test	h=100cm, 50times	0/10	Surface Appearance Photoelectric Properties Intact
Terminal strength test	W=9.8N, t=30 ± 5s	0/10	
Lead bending test	W=4.9N, 2times	0/10	